

May 25, 2006

Mr. Steve Marsh George, Miles & Buhr, LLC 206 West Main Street Salisbury, MD 21801

RE: PLUS review – PLUS 2006-04-06; The Oaks at Georgetown

Dear Mr. Marsh:

Thank you for meeting with State agency planners on May 3, 2006 to discuss the proposed plans for the Oaks at Georgetown project to be located on South Beford Street and Arrow Safety Blvd.

According to the information received, you are seeking site plan approval for 506 residential units on 95.77 acres.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as the Town of Georgetown is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the Town.

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. *Our office*

notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.

State Strategies/Project Location

• The proposed project is within and Investment Level 1 & 2 according to the Strategies for State Policies and Spending and within the Town of Georgetown. In these areas State policies support development that is consistent with the character of the area.

Street Design and Transportation

- Arrow Safety Road is classified as a local road and South Bedford Street is classified as a collector road. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads and 40 feet from the centerline on collector roads. Therefore they will require right-of-way dedication along the frontage to provide any additional width needed from this project.
- Bicycle and pedestrian facilities will be required along the site frontage on Arrow Safety Road and South Bedford Street. The DelDOT Subdivision Manager for Sussex County, Mr. John Fiori, will determine the specific type of improvements, e.g. sidewalks or a multi-use path, as part of the entrance plan review. He may be reached at (302) 760-2260.

Natural and Cultural Resources

- Statewide Wetland Mapping Project (SWMP) maps indicate the presence of areas of palustrine wetlands on this parcel. PLUS application materials indicate that these wetlands have been delineated and that the Corps of Engineers has verified this determination. A 100-foot buffer is provided from wetlands and McGee ditch. The developer should be commended for incorporating this standard DNREC design recommendation into the project.
- Approximately 70 percent of the projected land area contains wetland associated (hydric) soils.
- It should also be noted that the hydric soils mapped on subject parcels are likely to have a seasonal high water table within a depth of one-foot from the soil surface. Building in such soils may leave prospective residents of this and

adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding

- DNREC has not surveyed this property; therefore, it is unknown if there are staterare or federally listed plants, animals or natural communities at this project site that would be affected by project activities. In order to provide more informed comments and to make reasonable recommendations, the DNREC program botanist and zoologist request the opportunity to survey the forested and wetland resources which could potentially be impacted by the project. This would also allow the applicant the opportunity to reduce potential impacts to rare species and to ensure that the project is environmentally sensitive. Please contact Bill McAvoy or Kitt Heckscher at (302) 653-2880 to set up a site visit.
- Additional efforts should be made to increase the amount of forest conserved onsite by eliminating lots in the northwest portion of the project site.
- The stormwater management ponds need to be removed from the wooded riparian buffer. Trees function in flood abatement and erosion control and it does not make sense to remove them to control stormwater, especially when tree removal can exacerbate flooding problems. Alternate methods of stormwater containment should also be explored (such as bioswales, etc.).
- Secondly, there are areas of open space referred to as "pocket parks" that are located on corners, behind lots, and other irregular places that are not really conducive to use by the whole community and are not as accessible as a larger area of open space. Residents may not use these spaces as they appear to be an extension of the adjacent landowners' property, essentially the feeling of being in someone's backyard. The applicant should consider leaving a larger area of forested open space that the whole community can use. This could be accomplished by removing or relocating some of the lots and infrastructure that are currently in the forested area (mostly in the northwest corner of the site plan).
- Because there is forest loss associated with this project, DNREC recommends that the developer/landowner contact the Delaware Native Plant Society to initiate a plant rescue. Selected plants from the site of disturbance will be collected by Society members and transplanted to the Society's nursery. Plants will then be used in restoration projects and/or sold at the Society's annual native plant sale. This can be done at no expense or liability to the developer/landowner. Please contact Lynn Redding at (302) 736-7726 or lynn redding@ml.com.

The Division of Historical and Cultural Affairs would appreciate the opportunity to look for archaeological sites and learn something about their location, nature, and extent prior to any ground-disturbing activities. DHCA also requests that the developer include sufficient landscaping to buffer the noise from the adjacent historic properties.

The following are a complete list of comments received by State agencies:

Office of State Planning Coordination – Contact: Herb Inden 739-3090

The proposed project is within and Investment Level 1 & 2 according to the Strategies for State Policies and Spending and within the Town of Georgetown. In these areas State policies support development that is consistent with the character of the area.

<u>Division of Historic and Cultural Affairs - Contact: Alice Guerrant 739-5685</u>

Nothing is known within this parcel. However, the Beers Atlas of 1868 shows the T. Hatfield and the J. Sorden houses within the area, along Bedford St. The Hatfield House is gone before the 1938 USDA aerial, and the J. Sorden House is gone before the 1992 aerial photograph. Archaeological resources associated with these houses may still remain on the parcel. There is only a low potential for prehistoric-period archaeological sites in this area. There is a building (S-3210) to the north and two houses (S-10152 and S-10148) to the south that may be affected by increased noise from this parcel.

Small, rural, family cemeteries often are found in relation to historic farm complexes, such as the Hatfield and Sorden houses, usually a good distance behind or to the side of the house. The developer should be aware of Delaware's Unmarked Human Remains Act of 1987, which governs the discovery and disposition of such remains. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out. The Division of Historical and Cultural Affairs will be happy to discuss these issues with the developer; the contact person for this program is Faye Stocum, 302-736-7400.

They would appreciate the opportunity to look for archaeological sites and learn something about their location, nature, and extent prior to any ground-disturbing activities. DHCA also requests that the developer include sufficient landscaping to buffer the noise from the adjacent historic properties.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- The developer has completed a traffic impact study (TIS) for this project. A copy of a February 28, 2006, letter prepared by the DelDOT consultant, McCormick Taylor, reviewing that study is enclosed. The letter includes recommendations for road improvements to be required of the developer, and DelDOT has made those recommendations to the Town.
- 2) Arrow Safety Road is classified as a local road and South Bedford Street is classified as a collector road. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads and 40 feet from the centerline on collector roads. Therefore they will require right-of-way dedication along the frontage to provide any additional width needed from this project.
- 3) DelDOT commends the developer for providing the proposed collector stub street.
- Bicycle and pedestrian facilities will be required along the site frontage on Arrow Safety Road and South Bedford Street. The DelDOT Subdivision Manager for Sussex County, Mr. John Fiori, will determine the specific type of improvements, e.g. sidewalks or a multi-use path, as part of the entrance plan review. He may be reached at (302) 760-2260.
- 5) The developer's site engineer should contact Mr. Fiori regarding the specific requirements for access.

<u>The Department of Natural Resources and Environmental Control - Contact:</u> <u>Kevin Coyle 739-9071</u>

Green Infrastructure

Portions or all of the lands associated with this proposal are within the Livable Delaware Green Infrastructure area established under Governor Minner's Executive Order #61 that represents a network of ecologically important natural resource lands of special state conservation interest.

Green infrastructure is defined as Delaware's natural life support system of parks and preserves, woodlands and wildlife areas, wetlands and waterways, productive agricultural and forest land, greenways, cultural, historic and recreational sites and other natural areas

all with conservation value. Preserving Delaware's Green Infrastructure network will support and enhance biodiversity and functional ecosystems, protect native plant and animal species, improve air and water quality, prevent flooding, lessen the disruption to natural landscapes, provide opportunities for profitable farming and forestry enterprises, limit invasive species, and foster ecotourism.

Voluntary stewardship by private landowners is essential to green infrastructure conservation in Delaware, since approximately 80 percent of the State's land base is in private hands. It is in that spirit of stewardship that the Department appeals to the landowner and development team to protect sensitive resources through an appropriate site design.

Soils

Based on the Sussex County soil survey Evesboro, Woodstown, Fallsington, and Pocomoke were mapped on subject parcel(s). Evesboro is an excessively well-drained upland soil that has moderate limitations for development on account of its' rapid permeability. Woodstown is a moderately well-drained soil of low-lying uplands that has moderate limitations for development. Fallsington and Pocomoke are poorly to very poorly-drained wetland associated (hydric) soils that have severe limitations for development. Approximately 70 percent of the projected land area contains wetland associated (hydric) soils.

It should also be noted that the hydric soils mapped on subject parcels are likely to have a seasonal high water table within a depth of one-foot from the soil surface. Building in such soils may leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding. This issue is of particular concern during periods of high-intensity long duration rainfall events associated with tropical storms/hurricanes or "nor'easters." Flooding probabilities may be further augmented by surface water runoff emanating from created forms of structural imperviousness (roof tops, roads, and sidewalks). Therefore, the applicant should refrain from building on lots containing mapped hydric soils or soils delineated as such by their consulting soil scientist, and reduce the amount of constructed surface imperviousness to the greatest extent possible. A majority of the soils on this parcel (estimated at 70%), are mapped as hydric.

Wetlands

Statewide Wetland Mapping Project (SWMP) maps indicate the presence of areas of palustrine wetlands on this parcel. PLUS application materials indicate that these

wetlands have been delineated and that the Corps of Engineers has verified this determination.

A 100-foot buffer is provided from wetlands and McGee ditch. The developer should be commended for incorporating this standard DNREC design recommendation into the project.

Impervious Cover

Based on a review of the submitted PLUS application, the applicant projects that only about 28% of this parcel will be rendered impervious following this parcel's development. However, this figure appears to be a significant underestimate given the scope and density of this project. The applicant should be made aware that all forms of constructed surface imperviousness (i.e., rooftops, sidewalks and roads) should be included in the impervious surface calculation. It is strongly recommended that the applicant recalculate this figure to verify whether their post-development projections realistically reflect the actual amount of created post-development surface imperviousness.

Studies link increases in impervious cover to decreases in water quality. Based on analyses of 2002 aerial photography by the University of Delaware, the Broadkill watershed had about 7.9 percent impervious cover. Although this data is almost 4 years old and likely an underestimate, it underscores the importance of a proactive strategy to mitigate for predictable and likely cumulative environmental impacts. Since the amount of imperviousness generated by this project is likely to be significantly higher (28%) than the desirable watershed threshold of 10 percent, the applicant is strongly advised to pursue best management practices (BMPs) that mitigate or reduce some of the most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials ("pervious pavers") in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation or additional tree plantings are examples of practical BMPs that could easily be implemented to reduce surface imperviousness.

ERES Waters

This project is located adjacent to receiving waters of the Inland Bays designated as waters having Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 5.6 of Delaware's "Surface Water Quality Standards" (as amended July 11, 2004), specify that all designated ERES waters and receiving tributaries develop a

"pollution control strategy" to reduce non-point sources of pollutants through implementation of Best Management Practices (BMPs). Best Management Practices as defined in subsection 5.6.3.5 of this section, expressly authorizes the Department to provide standards for controlling the addition of pollutants and reducing them to the greatest degree achievable and, where practicable, implementation of a standard requiring no discharge of pollutants.

TMDLs

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Inland Bays Watershed. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. This project is located in the https://district.org/high-nutrient-reduction-area-requiring-an-85 percent and 65 percent reduction in nitrogen and phosphorus, respectively. A Total Maximum Daily Load (TMDL) is the maximum level of pollution for which a water quality limited water body can assimilate without compromising use and recreational goals such as swimming, fishing, drinking water, and shell fish harvesting.

Compliance with TMDLs through the PCS

The proposed Pollution Control Strategy requires the completion of a nutrient budget to estimate nutrient load changes following development; documentation of these load changes will be assessed through a nutrient budget protocol. The nutrient budget protocol is a computer-based model that quantifies post-development nutrient loading under a variety of land use scenarios in combination with a variety (or absence) of BMP types and intensities. The post-development loading rate is then compared with the predevelopment loading rate as a means to assess whether the project meets the acceptable TMDL nutrient reduction levels. Although the Watershed Section customarily calculates a preliminary nutrient budget prior to the PLUS meeting, pertinent information necessary for this calculation was either missing, unclear, or incomplete. Therefore, the following concerns need to be addressed before a reasonably accurate nutrient budget can be calculated:

1) Stormwater design methodologies (type, number and connectivity) were not specified or unclear in the application.

- 2) The 404 wetland delineation line was not apparent on the submitted conceptual lot layout. Since an accurate accounting of nutrient impacts (via the nutrient budget protocol) is dependent on an accurate accounting of wetlands impacts, an approved ACOE field wetlands delineation should be used as the primary basis to assess such impacts. Wetlands acreage figures should be assessed from the approved delineation, not from National Wetlands Inventory (NWI) or Statewide Wetland Mapping Project (SWMP) maps. Although the applicant stated in the PLUS application that the wetlands acreage figures were based on an approved wetlands delineation, it was unclear from the submitted information whether this was in fact the case.
- 3) The average buffer width should be specified instead of a range it is not possible to use a buffer width range in the nutrient budget calculation.
- 4) The reported impervious cover figure (i.e., 28%) appears to understate the likely amount of post-development surface imperviousness generated from this project. This figure should be recalculated in a manner that more realistically reflects all created forms of post-development constructed surface imperviousness (roads, sidewalks, and rooftops).

It is then suggest that the applicant verify their project's compliance (after correcting all concerns and/or using realistic assumptions) with the specified TMDL loading rates by running the model themselves. As mentioned previously, we strongly recommend that the applicant consider the use of the aforementioned BMPs to help ensure compliance with the required TMDLs. Please contact Lyle Jones or John Martin of Watershed Section at 739-9939 for the acceptable model protocol.

Water Supply

The project information sheets state water will be provided to the project by the Town of Georgetown via a central water system. DNREC records indicate that the project is located within the public water service area granted to the Town of Georgetown under Certificate of Public Convenience and Necessity 01-CPCN-01.

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

Sediment and Erosion Control/Stormwater Management

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson, Program Manager, at (302) 856-7219 for details regarding submittal requirements and fees.

It is strongly recommended that you contact the Sussex Conservation District to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan. The site topography, soils mapping, pre- and post-development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion.

It is strongly recommended that you contact the Drainage Section to discuss any tax ditch easement and right-of-way requirements for any tax ditches on or adjacent to the property in question. If the project is proposing to discharge into any tax ditch, then a letter of no objection will need to be submitted from the Drainage Section for the encroachment into the right-of-way.

A Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity must be submitted to the Division of Soil and Water Conservation along with the \$195 NOI fee prior to plan approval.

Applying practices to mimic the pre-development hydrology on the site, promote recharge, maximize the use of existing natural features on the site, and limit the reliance on structural stormwater components, such as maintaining open spaces, should be considered in the overall design of the project as a stormwater management technique.

Each stormwater management facility should have an adequate outlet for release of stormwater. Any drainage conveyed onto this site from neighboring properties must be adequately conveyed through the site to the discharge point without interruption.

Clearly address how Stormwater Quality and Quantity Treatment will be provided. If this project is eligible for a Quantity Waiver, please make the request in the stormwater narrative citing the specific regulation.

Please indicate on the sediment and stormwater management plan who shall be responsible for maintenance of the stormwater management facilities both during construction and after. During the design of the sediment control and stormwater management plan, considerations should be made for maintenance (i.e. access, easements, etc.) of any structures or facilities.

If a stormwater management pond is going to be utilized as a sediment trap/basin during construction, it must be designed to accommodate 3600 cubic feet of storage per acre of contributing drainage area until project stabilization is complete.

All ponds are required to be constructed per Pond Code 378.

Please note that if the stormwater facilities will impact wetlands, a permit must be provided to the District prior to receiving approval. Please address.

A Certified Construction Reviewer (CCR) is required for any project that is 50 acres or greater.

DNREC regulations require no more than 20 acres to be disturbed at one time. A phased erosion and sediment control plan and sequence of construction will be required.

Under the DNREC Health and Safety Memo of 2000, all wet ponds are required to have an open space depth of 3 feet or more that comprises 50-75 percent of the area of the pond.

Consideration should be made for any adjacent properties during the design of the project, including drainage and erosion/sediment control.

If any waivers and variances are sought for the project in question, these items should be addressed at the preliminary meeting. Any requests for waivers and variances should be included in the stormwater report narrative.

Drainage

This project is within a tax ditch area (McGee) and would have an impact on current tax ditch easements. A planner visited the Drainage Program last year collecting base info for the project. Tax ditch easements were discussed at that time. Changes to the tax ditch easements will require a change to the court order. That will involve a series of

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meetings with the Drainage Program and the tax ditch managers as final plans develop. The landowner/engineer should contact and schedule time with Brooks Cahall at 302-856-5488.

In addition, the Drainage Section advises the following in site development:

The Drainage Section requests that all existing ditches on the property be checked for function and cleaned if needed prior to the construction of homes. Wetland permits may be required before cleaning ditches.

The Drainage Section requests that all precautions be taken to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water.

The Drainage Section strongly recommends that any drainage conveyance between two parcels within a subdivision be dedicated as a drainage easement and such easement be designated as passive open space, not owned by individual landowners. The easement should be of sufficient width to allow for future drainage maintenance as described below:

- Along an open ditch or swale, the Drainage Section recommends a maintenance equipment zone of 25 feet measured from the top of bank on the maintenance side, and a 10-foot setback zone measured from top of bank on the non-maintenance side. These zones should be maintained as buffers to aid in the reduction of sediment and nutrients entering into the drainage conveyance. Grasses, forbs and sedges planted within these zones should be native species, selected for their height, ease of maintenance, erosion control, and nutrient uptake capabilities. Trees and shrubs planted within the maintenance zone should be native species spaced to allow for drainage maintenance at maturity. Trees should not be planted within 5 feet of the top of ditch to avoid future blockages from roots.
- Along a stormwater pipe, the Drainage Section recommends a maintenance equipment zone of 15 feet on each side of the pipe as measured from the pipe centerline. This zone should be maintained as buffers to aid in the reduction of sediment and nutrients entering into the drainage conveyance. Grasses, forbs and sedges planted within these zones should be native species selected for their height, ease of maintenance, erosion control, and nutrient uptake capabilities. Trees and shrubs planted within the maintenance zone should be spaced to allow for drainage maintenance at maturity.

The Drainage Section recommends that any drainage/utility easement owned by an individual landowner should not have structures, decks, buildings, sheds, kennels, fences or trees within the drainage easement to allow for future drainage maintenance.

Open Space

In areas set aside for passive open space along the ditch in the center of the property, the developer is encouraged to plant native shrubs and grasses to create a low-maintenance meadow ecosystem. Once established, these ecosystems provide increased water infiltration into groundwater, decreased run-off into surface water, air quality improvements, and require much less maintenance than traditional turf grass, an important consideration if a homeowners association will take over responsibility for maintenance of community open spaces.

Open space containing forest and/or wetlands should be placed into a permanent conservation easement or other permanent protection mechanism. Conservation areas should also be clearly demarked by permanent monuments to avoid infringement by homeowners.

Site Visit Request

DNREC has not surveyed this property; therefore, it is unknown if there are state-rare or federally listed plants, animals or natural communities at this project site that would be affected by project activities.

In order to provide more informed comments and to make reasonable recommendations, the DNREC program botanist and zoologist request the opportunity to survey the forested and wetland resources which could potentially be impacted by the project. This would also allow the applicant the opportunity to reduce potential impacts to rare species and to ensure that the project is environmentally sensitive. Please contact Bill McAvoy or Kitt Heckscher at (302) 653-2880 to set up a site visit.

Forest Preservation

Additional efforts should be made to increase the amount of forest conserved on-site by eliminating lots in the northwest portion of the project site.

According to the application 17.37 out of 32.3 acres of forest will be removed by this project. In reality, once this site is built out and landowners have cleared even more trees for pools, play areas, sheds, etc., the amount of forest loss will likely be greater than that

initially estimated. Wildlife currently inhabiting the forest will have to disperse into surrounding areas which can lead to an increase in human/animal conflicts. In addition, the woods within the project area are part of a larger forest block, and will be fragmented by the current site plan. Forest fragmentation also separates wildlife populations, increases road mortality, and increases "edge effects" that leave many forest dwelling species vulnerable to predation and allows the infiltration of invasive species. Therefore, we recommend that the site plan be changed to allow for greater forest preservation.

First of all, the stormwater management ponds need to be removed from the wooded riparian buffer. Trees function in flood abatement and erosion control and it does not make sense to remove them to control stormwater, especially when tree removal can exacerbate flooding problems. Alternate methods of stormwater containment should also be explored (such as bioswales, etc.).

Secondly, there are areas of open space referred to as "pocket parks" that are located on corners, behind lots, and other irregular places that are not really conducive to use by the whole community and are not as accessible as a larger area of open space. Residents may not use these spaces as they appear to be an extension of the adjacent landowners' property, essentially the feeling of being in someone's backyard. The applicant should consider leaving a larger area of forested open space that the whole community can use. This could be accomplished by removing or relocating some of the lots and infrastructure that are currently in the forested area (mostly in the northwest corner of the site plan).

Lastly, if a large percentage of forest loss is still going to occur despite recommendations to the contrary, then DNREC recommends that trees not be cleared from April 1st to July 31st to minimize impacts to birds and other wildlife that utilize forests for breeding.

Plant Rescue

Because there is forest loss associated with this project, DNREC recommends that the developer/landowner contact the Delaware Native Plant Society to initiate a plant rescue. Selected plants from the site of disturbance will be collected by Society members and transplanted to the Society's nursery. Plants will then be used in restoration projects and/or sold at the Society's annual native plant sale. This can be done at no expense or liability to the developer/landowner. Please contact Lynn Redding at (302) 736-7726 or lynn_redding@ml.com.

Nuisance Waterfowl

Stormwater management ponds that remain in the site plan may attract waterfowl like resident Canada geese and mute swans that will create a nuisance for community

residents. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species. However, native plantings, including tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (at least 50 feet) around ponds, are not as attractive to geese because they do not feel safe from predators and other disturbance when their view of the area is blocked. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with a reduction in the number of ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Underground Storage Tanks

There are seven active/inactive LUST sites located near the proposed project:

First State Chevrolet, Facility # 5-000222, Project # S9105084
Three Bells Market, Facility # 5-000248, Project # S9404005
Cheer Trans Home Service, Facility # 5-000388, Project # S8901001
Division of Motor Vehicles, Facility # 5-000408, Project # S9707099
Georgetown State Service Center, Facility # 5-000701, Project #s S9207175 and S9306114

Town of Georgetown Pumping Station, Facility # 5-000777, Project # S9511277 Sussex County Health Unit, Facility # 5-000825, Project # S9511278

No environmental impact is expected from the above inactive/active LUST sites. However, should any underground storage tank or petroleum contaminated soil be discovered during construction, the Tank Management Branch must be notified as soon as possible. It is not anticipated that any construction specifications would need to be changed due to petroleum contamination. However, should any unanticipated contamination be encountered and PVC pipe is being utilized, it will need to be changed to ductile steel with nitrile rubber gaskets in the contaminated areas.

Solid Waste

Each Delaware household generates approximately 3,600 pounds of solid waste per year. On average, each new house constructed generates an additional 10,000 pounds of construction waste. Due to Delaware's present rate of growth and the impact that growth will have on the state's existing landfill capacity, the applicant is requested to be aware of the impact this project will have on the State's limited landfill resources and, to the extent

possible, take steps to minimize the amount of construction waste associated with this development.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 38.8 tons (77,665.7 pounds) per year of VOC (volatile organic compounds), 32.2 tons (64,302.0 pounds) per year of NOx (nitrogen oxides), 23.7 tons (47,443.2 pounds) per year of SO2 (sulfur dioxide), 2.1 ton (4,223.3 pounds) per year of fine particulates and 3,248.3 tons (6,496,638.5 pounds) per year of CO2 (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 15.7 tons (31,326.1 pounds) per year of VOC (volatile organic compounds), 1.7 ton (3,446.8 pounds) per year of NOx (nitrogen oxides), 1.4 ton (2,860.4 pounds) per year of SO2 (sulfur dioxide), 1.8 ton (3,691.2 pounds) per year of fine particulates and 63.5 tons (126,989.1 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 6.2 tons (12,415.4 pounds) per year of NOx (nitrogen oxides), 21.6 tons (43,184.1 pounds) per year of SO2 (sulfur dioxide) and 3,184.8 tons (6,369,649.4 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO_2	PM _{2.5}	CO ₂
Mobile	38.8	32.2	23.7	2.1	3248.3
Residential	15.7	1.7	1.4	1.8	63.5
Electrical		6.2	21.6		3184.8
Power					
TOTAL	54.5	40.1	46.7	3.9	6496.6

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 6.2 tons of nitrogen oxides per year and 21.6 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage, http://www.energystar.gov/:

"ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment."

The Energy office in DNREC is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. They highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

They also recommend that the home builders offer geothermal and photo voltaic energy options. Applicable vehicles should use retrofitted diesel engines during construction. The development should provide tie-ins to the nearest bike paths, links to mass transit, and fund a lawnmower exchange program for their new occupants.

State Fire Marshal's Office - Contact: Duane Fox 856-5298

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office. At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. Fire Protection Water Requirements:

- ➤ Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Townhouses)
- ➤ Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required. (One & Two- Family Dwelling)

➤ Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. Fire Protection Features:

For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan.

c. Accessibility

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from South Bedford St and Arrow Safety Rd must be constructed so fire department apparatus may negotiate it
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- ➤ The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. Gas Piping and System Information:

Provide type of fuel proposed, and show locations of bulk containers on plan.

e. Required Notes:

- ➤ Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use

- ➤ Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- > Square footage of each structure (Total of all Floors)
- ➤ National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Townhouse 2-hr separation wall details shall be shown on site plans
- ➤ Note indicating if building is to be sprinklered
- ➤ Name of Water Provider
- ➤ Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.delawarestatefiremarshal.com, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Milton Melendez 698-4500

The Delaware Department of Agriculture has no objections to the proposed development. The *Strategies for State Policies and Spending* encourages environmentally responsible development within Investment Level 1 areas.

Right Tree for the Right Place

The Delaware Department of Agriculture Forest Service encourages the developer to use the "Right Tree for the Right Place" for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource.

Native Landscapes

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent landuse activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive

to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

Public Service Commission - Contact: Andrea Maucher 739-4247

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

Delaware State Housing Authority – Contact Karen Horton 739-4263

The proposed land plan is a mix of 248 wide townhomes, 205 wide townhomes and 53 detached single-family homes. The proposed development is located on S. Bedford Street and Arrow Safety Road. According to the *State Strategies Map*, the proposal is located in an Investment Level 1 area. As a general planning practice, DSHA encourages residential development in areas where residents will have proximity to services, markets, and employment opportunities such as Investment Level 1 and 2 areas outlined in the *State Strategies Map*. Furthermore, DSHA encourages residential development in Level 1 and 2 areas that is affordable to first time homebuyers. The proposal indicates the targeted population is for first time homebuyers. For informational purposes, the most recent real estate data collected by DSHA, the median home price in Sussex County is \$237,000. However, families earning 100% of Sussex County's median income only qualify for mortgages of \$171,216, thus creating an affordability gap of \$65,784. The provision of units within reach of families earning at least 100% of Sussex County's median income would help increase housing opportunities for first homebuyers.

Department of Education - Contact: John Marinucci 739-4658

DOE offers the following comments on behalf of the Indian River School District.

- 1. Using the DOE standard formula, this development will generate an estimated 253 students.
- 2. DOE records indicate that the Indian River School Districts' *elementary schools* are at or beyond 100% of current capacity based on September 30, 2005 elementary enrollment.
- 3. DOE records indicate that the Indian River School Districts' *secondary schools are not at or beyond 100% of current capacity* based on September 30, 2005 secondary enrollment.
- 4. This development will create additional elementary student population growth which will further compound the existing shortage of space. The developer is strongly encouraged to contact the Indian River School District Administration to

- address the issue of elementary school over-crowding that this development will exacerbate.
- 5. DOE requests developer work with the Indian River School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the local school district.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

For Constance C. Holland, AICP

Desu

Director

CC: Town of Georgetown